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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/768,506

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6887

7590

12/08/2006

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EXAMINER

PILKINGTON, JAMES

ART UNIT

PAPER NUMBER

3682

DATE MAILED: 12/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/768,506

Applicant(s)

PASCOE ET AL.

Examiner

James Pilkington

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133) Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 1/30/2004.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the oil pump housing includes a third bore for supporting the sprocket end of the drive shaft (clm 10) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
2. Figure 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 10 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification does not enable for the *sprocket end* of the drive shaft to be supported by the oil pump housing. According to the specification, drawings and claim 11, the pump housing supports the *pump end* of the drive shaft.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Clm 2 recites the limitation "wherein the gear assembly consists of the drive gear and the driven gear." The phrase "consists of" is closed end meaning that the gear assembly has only a drive gear and a driven gear, nothing more. Clm 1 recites that the gear assembly also includes the drive shaft (line 8 of the clm) and the figures show that the balance shaft supports the driven gear. It is not clear to the examiner how the

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device only has a drive gear and a driven gear as there would be no supports for these gears if the assembly "consists of the drive gear and the driven gear."

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-3, 6-11, 13 and 14, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Sykes, USP 2,914,137.

Sykes discloses an oil pump drive assembly for an automobile engine comprising:

- An oil pump (40)
- A drive shaft (25) having a distal input end (outside pump 40) and an opposite pump end (end connecting to pump 40, C2/L18-57)
- A sprocket (27) secured to the distal input end
- A gear assembly (gears 34 and 35) comprising a drive gear (34) secured to the drive shaft (25) and a driven gear (35), the gear assembly being positioned at the distal input end of the drive shaft and the oil pump positioned at the opposite end (see Figure 4)

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- A balance shaft (33) extending axially from the driven gear (35) for rotation with the driven gear (35) in response to rotation of the drive shaft (25)
- A housing (16) having a sprocket side (left of gears 34 and 35 in Figure 4) and a pump side (right of gears 34 and 35 in Figure 4)
- A first bore (left of 35 in Figure 4) and a second bore (by character 33 in Figure 4) for supporting the balance shaft (33)
- An oil pump housing (40) attached to the pump side (right in Figure 4) of the housing (16)
- A third bore (at 26 near gear 27) for supporting the sprocket end of the drive shaft (25)
- A fourth bore in the oil pump housing (the shaft extends into the housing to drive the pump) for supporting the pump end of the drive shaft (25)

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sykes, USP 2,914,137, in view of Killion, USPG Pub 2001/0023623.

Sykes discloses all of the claimed subject matter as described above.

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Sykes does not disclose the driven gear having a smaller diameter than the drive gear and that the balance shaft rotates at twice the speed of the drive shaft

Killion teaches a driven gear (72) having a smaller diameter than the drive gear (84) and that the balance shaft rotates at twice the speed of the drive shaft (paragraph 0062) for the purpose of counterbalancing the vibrations caused by the engine (paragraph 0062).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Sykes and provide a driven gear having a smaller diameter than the drive gear and that the balance shaft rotates at twice the speed of the drive shaft, as taught by Killion, for the purpose of counterbalancing the vibrations caused by the engine.

11. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sykes, USP 2,914,137, in view of Beardmore, USP 6,183,230.

Sykes discloses all of the claimed subject matter as described above.

Sykes does not disclose the oil pump operates at the same speed as the engine.

Beardmore teaches that an oil pump can operate at the same speed as the engine (crankshaft 12 drives the oil pump 14) for the purpose of providing a pump drive system that does not generate noise (C1/L35-38).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Sykes and provide for the oil pump to operate at

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the same speed as the engine, as taught by Beardmore, for the purpose of providing a pump drive system that does not generate noise.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Pilkington whose telephone number is (571) 272-5052. The examiner can normally be reached on Monday-Friday 8:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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11.29.06



RICHARD RIDLEY  
SUPERVISORY PATENT EXAMINER